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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Timo Mattila

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EXAMINER

WILSON, DEMARIS R

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/501,710	<b>Applicant(s)</b> MATTILA, TIMO	
	<b>Examiner</b> DEMARIS R. WILSON	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/21/2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11, 13, 15, 17-20, 22, 23, 25 and 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11, 18-20, 22, 23, 25 and 27 is/are rejected.
- 7) ☒ Claim(s) 13, 15 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Acknowledgement of Applicant's Amendments***

The amendments made to the claims in the Amendment, herein Amdt. A, filed on 12/21/2007 have been received and considered by the Examiner.

### ***WITHDRAWN OBJECTIONS***

The objection to the claims made of record in the previous office action mailed 06/22/2007 has been withdrawn due to Applicant's cancellation of the claims.

### ***WITHDRAWN REJECTIONS***

The 35 U.S.C. 112, second paragraph rejection of claims 11-26 made of record in the office action mailed 06/22/2007 has been withdrawn due to Applicant's amendment.

### ***NEW REJECTIONS***

The 35 U.S.C. 103 rejection of the claims made of record in the previous Office Action mailed 06/22/2007 has been withdrawn due to applicant's amendments to the claims, however, a new rejection has been made for the following reasons that address the amendments made in the claims.

### ***Claim Objections***

Claim 11 is objected to because of the following informalities: the recitation of "wherein the cover part is movavle" is considered to have a misspelled word. It is considered that applicant meant to recite "movable" instead of "movavle". Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11, 18-20, 22-23, 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lysson et al <US 5897681> in view of Yoon et al <US 2001/0005992>. Lysson, regarding claims 11 and 25 and 27, discloses an apparatus for drawing an optical fiber (10) from a glass preform (9) having (see Figure and column 3 lines 12-57)

a. A tubular heating element (2) surrounding the fiber preform, for heating the fiber preform

b. An outside insulating layer (3) of the heating element

c. A frame part (7) of the drawing furnace operative to support said heating element and said insulating layer in the drawing furnace

d. A cover part (11/12) operative to close the area surrounding the insulating layer from the gas flow surrounding the fiber preform

e. A gas tube (13) for flowing helium with holes, or nozzles, (15) fitted between cover part (11/12) and heating element (2)

f. A cover part (11/12) fitted mobile in relation to the frame with a location of the cover part in relation to an upper edge of the heating elements remaining constant.

3. While Lysson does reasonably suggest having a cover part, or seal (12), that can be fitted mobile, or, based upon Lysson's disclosure, (see column 3 lines 23-25) as a seal

could be used/added to further reduce gas leaks. This suggestion does not explicitly recite such mobility; however, it is considered that since such a seal can be moved, ie taken off, the embodiment is fully functional with/without the seal thereby making the seal movable. Additionally, it is considered that the force between the cover part and heating element is expected to be adjustable because of Lysson's disclosure of an apparatus for drawing an optical fiber being fully functional with/without the seal (12).

4. Therefore, the force on the coverpart and heating element can be adjusted, as in one embodiment there would be no force on the coverpart as it's not there thus adjusting the force. Although Lysson suggests such a mobile seal yet is silent on it's explicit mobility, Yoon does teach having a cap (130) to be rotated (ie fitted mobile) in an apparatus for optical fiber preform fabrication wherein helium is flown through a frame housing (110). It is considered that it would have been obvious to one of ordinary skill in the art at the time of invention to have combined the teachings of Yoon for having a cap (i.e. cover part/seal) on a movable furnace tube for fabricating an optical fiber preform with the disclosure of Lysson for having a drawing furnace for manufacturing an optical fiber with a drawing furnace to have a movable cover part/ seal to ensure that no gas escapes out of the gas chamber to provide a more uniform gas supply to the drawing region of the preform.

5. Regarding claims 18-20, Lysson's disclosure comprises having nozzles (i.e. rings) in the gas tube (see column 3 lines 26-35) to provide a uniform gas supply into the annular space formed by the surface of the preform.

6. Regarding claims 22-23, Lysson's apparatus comprises a gas tube (14) between a first inner ring space (15) and a second inner space (14).

***Allowable Subject Matter***

7. Claims 13, 15, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***RESPONSE TO ARGUMENTS***

Applicant's arguments under the "**Remarks:**" heading on pages 11-12 of Amdt. A have been considered but are not considered persuasive and are further unpersuasive in view of the new grounds of rejection addressing the amendments to the claims.

8. Applicant's arguments are substantially drawn to

- i. Lysson et al. does not suggest the present invention as recited in claim 11 since, among other things, Lysson et al. does not suggest a cover part or seal. Yoon et al. does not relate to a drawing furnace. Therefore, it would not be obvious to one of ordinary skill in the art to combine these references to result in the present invention as recited in claim 11. Accordingly, the combination of Lysson et al. and Yoon et al. does not suggest the present invention as recited in claim 11 or claims 18-20, 22, 23, or 25, which depend from claim 11.

It is considered that Lysson does disclose having a cover part/seal (11/12). It is further noted that Lysson discloses (see column 3 lines 57-65) that the furnace shape can be altered to adjust gas flow during the fiber drawing process. It is considered that having any change of shape (i.e. having different shaped caps/seals) would produce a similar result. Therefore having Yoon's teaching for expressly having a movable cap structure would not only produce a change of shape but also affect the flow of helium gas into the furnace.

9. While Yoon does not explicitly relate to a drawing furnace, it is considered that the invention of the combined references relates to a drawing furnace. Yoon, however, does

relate to a furnace for fabricating an optical fiber preform with helium gas flowing therethrough tubes as does Lysson. Therefore, there does exist some motivation to one having ordinary skill in the art to have a movable cap/seal as taught by Yoon with Lysson's apparatus. It is further noted that the invention of the combined references are not limited to intended usage. The instant claims will be interpreted and expected to patentably distinguish over the prior art in terms of structure rather than usage.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEMARIS R. WILSON whose telephone number is (571)272-6377. The examiner can normally be reached on 9-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/  
Supervisory Patent Examiner, Art  
Unit 1791

/D. R. W./  
Examiner, Art Unit 1791  
3/24/08